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Aspects of measuring the impact of new innovations in Finnish libraries

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Aspects of Measuring the Impact of New Innovations in Finnish Libraries

Abstract: Along with the change of paradigm of libraries' ways of action towards more networked and with the developing of new innovative services, new evaluation methods and indicators will be needed to show the value and impact of the operation of these services. The need for the new indicators goes further than mere numerical indicators, the main goal being to obtain knowledge about the strengths as well as the points of development of the services thus supporting the management process keeping in mind the producing of added value for the clientele.

Keywords: Performance indicators, Impact assessment, ISO 11620, ISO 16439, ISO 18461, Net Promoter Score

1. Introduction

The megatrends of our time touch the cultural heritage organizations, too. The constantly changing information environment with the huge growth of information and access to it and the development of information technology are changes that may sound, if not worrying, at least challenging from the point of view of managing the cultural heritage organizations, e.g. libraries.

This is true especially in the conditions of need for more allowances both for retaining of staff and for the building and maintenance of the technological infrastructure of the organization in sometimes tightening economic environment.

There is a variety of definitions of policies of adapting the influence of global trends to the cultural heritage organizations. The Ministry of Education and Culture of Finland (2017) lays emphasis e.g. on high level of education, international cooperation, and export of Finnish competence. Much the similar topics are included in the Going Global report by British Council (2012) where e.g. the transnational education programmes and demands of cross-cultural exposure on studies are seen.

More recent reports, like the NMC Horizon Reports 2017; The Higher Education Edition (2017) and The Library Edition (2017), also emphasize importance of adopting of educational technology in higher education.

The increasing demand for flexibility and agility in the delivery of new and better services to users is noted by Yaver et al. (2016) who names the trend of connecting libraries, museums and cultural centres being materialized for the moment. The trend of connecting libraries, museums and cultural centres and offering services for storing audio-visual content, have a high importance to contribute in the development of the academic and scientific communities and they possess the necessary capabilities, yet emphasizing the need to convert these services for added value to the end users (Yaver et al. 2016).

The International Federation of Library Associations and Institutions (IFLA) acknowledges access to information as having a profound influence on future developments in the information economy. In its Trend Report, IFLA (2013, 2016) identifies five top-level trends, which are playing a key role in shaping our future information ecosystem:

- Trend 1: New Technologies will both expand and limit who has access to information.
- Trend 2: Online Education will democratise and disrupt global learning.
- Trend 3: The boundaries of privacy and data protection will be redefined.
- Trend 4: Hyper-connected societies will listen to and empower new voices and groups.
- Trend 5: The global information environment will be transformed by new technologies.

The huge growth of the amount and availability of the information, the development of the communication technology and the globalisation of value networks have changed the logic of the innovation activity. They make the birth of new ideas and quick introduction of them possible worldwide. Growth of the human capital in the developing countries and the connecting of them more distinctly as a part of global economy has freed a huge number of innovation potential into use of mankind.

This change has made the competition genuinely global, which has strengthened the significance of cooperation and openness and changed its character from the level of a company and branches to the level of the persons and functions. The new ideas are refined into new products increasingly networked in the interaction of several different actors. By utilising cooperation networks, the organisations will find easier the know-how they need.

Already in 2003, Chesbrough (2003) described how the improvement of the trained workers' availability and the increase in the mobility have led to the growth of the know-how and to the quicker than before transition of information between the companies. The inclusion of the users, subcontractors and other central interest groups in the innovation activity opens the developed technologies to be copied by others but also makes possible the currents of new ideas back to the company as a consequence of which more productive operation models are developed.

Therefore, the operation models required by the change in the global environment – openness, cooperation, interaction, mutual dependence, constant learning and ability to adapt oneself to the changes – have risen to the centre of the innovation policy.

Along with this development, new evaluation methods and indicators will be needed to show the value and impact of the operations and services of the cultural heritage organizations.

The need for the new indicators goes further than mere numerical indicators, the main goal being to obtain knowledge about the strengths as well as the points of development of the services thus supporting the management process keeping in mind produce of added value to the clientele.

New kinds of service concepts are emerging in those networks and problems – or at least challenges – arise when we try to assess their value or efficiency. The digital information environment gives an immense number of possibilities to analyse and use information.

According to Laine and Laitinen (2018), along with digitalization, the change of paradigm of cultural heritage organizations' ways of operations from traditional ways towards more networked ways is seen. This change is naturally reflected as a shift from traditional and easy to shape services towards multidimensional and many-faceted information environment.

So, there is a need to develop new innovations to break the tight and obsolete linking between the separate services of different cultural heritage organizations to meet the needs of clientele in this increasingly complex information environment.

The standardized guidances how to compile statistical data for the basis of reporting the operations of the cultural heritage organizations to their stakeholders have been drawn up both in the library sector (ISO 2789, ISO 11620) and in the museum sector (ISO 18461). There is, too, a special standardization for the national libraries (ISO/TR 28118) that will be updated from a Technical Report to standard (ISO/DIS 21248). Also the archive sector is for the moment drawing up an international standard for compiling the international archives' statistics (ISO/CD 19580).

In 2014, the standard ISO 16439 "Methods and procedures for assessing the impact of libraries" was published. It is the first documentation concerning the evaluation of the impact of one sector of cultural

heritage organizations. The standard considers the impact of libraries on individuals, institutions and society and in the standard, the concept of impact and other focal terms are defined. The standard is intended as a tool for the evaluation of impact and value of all types of libraries.

The latter standard is a natural consequence of the discussion concerning the growing demand for non-profit organizations to show proof of their value for their clientele, for their parent organizations and for the society.

Generally, the mission of the cultural heritage organizations in general is to promote the education and culture of the nations by creating experiences and insights. A more detailed mission is naturally formulated depending on the type of the organization. For instance, the libraries' mission is to provide fresh information for the need of education and learning and to support participation in information and culture in general.

2. The Era of New Paradigm

In the conditions of tightening economic climate the cultural heritage organizations have met the same challenges as every public sector organizations, with the demands of producing their services as high quality as it is feasible with an acceptable cost level. This became realism at the latest when the crisis of world economy started to affect public sector economy.

Hence, a change of the paradigm of evaluation and management of the organizations from quantitative and statistically oriented way of demonstrating their outcome towards showing the impact and value of the organization was seen.

For the present, among the cultural heritage organizations, only the libraries have a standardized guidance for evaluating the impact and value of the organization (ISO 16439). This international standard gives the libraries the path of compiling information for the reporting and evaluation of their operations and it supports the definitions of policy of the macro level but they also give the means for the developing indicators of new type.

In the libraries, there is only a little if at all discussion about the need and means of showing the results, impact and value of the library services to their clientele, their frame organizations or the society.

Yet, the International Standard ISO 16439 encourages the libraries to find new ways of measuring their operations.

Because libraries may not have resources for large surveys, they are proposed to limit their efforts of impact assessment to the most critical areas relevant to the library's main goals:

- impact of library collections;
- impact of the library as a place;
- impact of library on users' success.

The above-mentioned areas can be thought to be contained in the idea shown in Fig. 1, where an idea for the components of an indicator of new type is shown. Data collected from different sources gives the context for the analysis and is of help in understanding the findings.

Viewpoints to be taken into consideration in the measurement of the impact of new innovations, and thus also the requirements of new indicators are among others the point of view of the management, showing the impact and value of the services or the new innovations and showing of the impact and value reached by networking and cooperation.

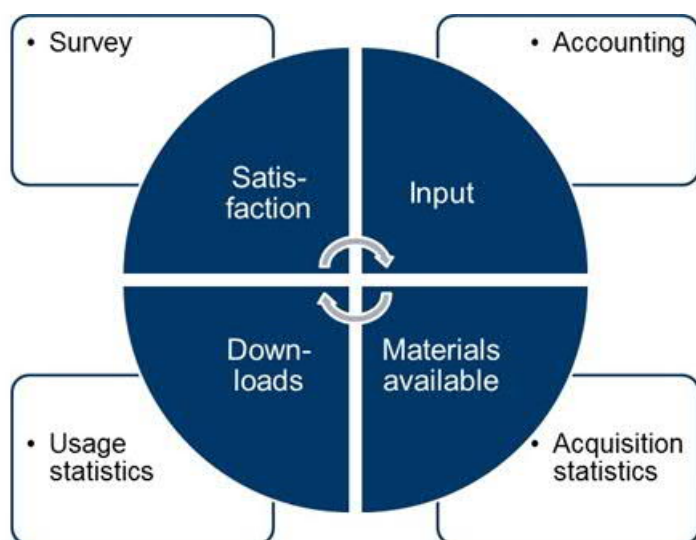


Fig. 1 Illustration of an idea for a new indicator. The user surveys give versatile information about the patrons. Accounting gives information about the economic input and use of money. The acquisitions statistics give information about the amount of materials acquired and usage statistics give information about the use of the materials acquired. (Source: the author.)

As the new services of cultural heritage organizations may remarkably differ from the traditional services, the demands for the indicators to measure them also are very different from the traditional measuring. In some cases, such as use of services through the interfaces, one simply must discard the traditional concept as the number of searches in a system – to which organization's credit should be counted the search results in the case one search command generates searches in systems of many organizations? In this context, it does not matter – and would be impossible to detect – to which organization the thanks falls. When measuring the added value produced in cooperation, the thanks belongs to all of them.

Whatever the truth, the idea for the indicators of new type derived from the International Standard ISO 16439 is to measure the results of operations and the added value the patrons get. For the present, there is no list of such performance indicators included in the International Standard ISO 11620 (Library performance indicators). Except that the International Standard ISO 16439 gives general guidelines for designing the methods for assessing the impact of the library, it also encourages the libraries to develop methods for identifying and providing their benefits to the users and the society.

It is self-evident that the impact of the cultural heritage organization on the users and the benefits they get cannot be measured with "hard" methods because of the abstractness of the concept of impact. Hence, there is a challenge to the cultural heritage organizations to adopt new methods in addition to using traditional quantitative methods like statistics and different performance measures that are based with "hard" and verifiable data.

The organizations may have lack of skills of using qualitative methods and the results from interview studies may not be seen as reliable or conclusive enough to be presented to the stakeholders. In addition, the qualitative methods are often perceived laborious and costly, especially in the condition of tightening economy of the libraries. Therefore, it would be a good idea for the libraries to grab the recommendation of the International Standard (ISO 16439:2014(E);4.6.3) to focus their impact assessment to the above mentioned critical areas covering the most relevant services from the point of view of the main goals of the libraries. This recommendation to the libraries was earlier presented by Laitinen (2018). This principle is surely valid for all the cultural heritage organizations.

An example of the change of paradigm of cultural heritage organizations' ways of operations from traditional towards more networked along with digitalization is the Finna service built in cooperation of The National Library of Finland and the Finnish cultural heritage organizations (Fig. 2). Finna is an online service that is gradually replacing the user interfaces of all Finnish libraries, archives and museums by combining metadata from several organizations in one search, thus exceeding the borders between the different organisations.

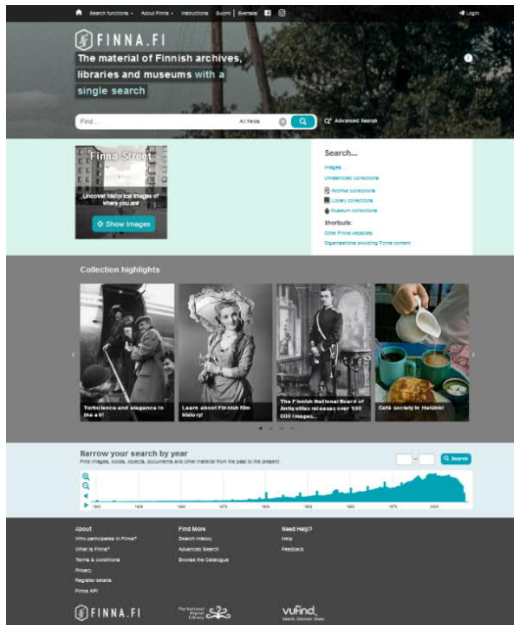


Fig. 2 Finna.fi (<https://finna.fi/?lng=en-gb>) is a one-stop destination for searching the freely available material provided by Finnish museums, libraries and archives.

Because the search results the patron gets are no more a merit of one organization but of several, neither the benefit nor value perceived by the patron are not produced by one organization only. To measure the impact of services produced by the networking of several organizations and the added value perceived by the patrons, new methods of impact assessment that are easy and non-laborious are needed.

Some libraries are already familiar with the International Standard ISO 16439, but there is not yet much experience of the standard's recommendation to turn the qualitative data they get e.g. from user surveys into numeric values (ISO 16439:2014(E), 2014; 5.6.3) or evaluation of the impact of the library's services on the users' success regarding to their skills and competence (ISO 16439:2014(E), 2014; 6.4.3).

Because this idea is applicable to all cultural heritage organizations, there is a reasonable cause for testing new types of indicators with the Finna service especially. One such an indicator is the Net Promoter Score (NPS) introduced by Reichheld (2003).

NPS is a statistical and measurable indicator for loyalty and it seems to fit together with both of the above-mentioned ideas of ISO 16439:

- Categorizing the qualitative data into numerical values;
- Limiting the assessment to the services that are the most relevant to the library's main goals.

The idea of NPS is to ask the patrons to give on a scale 0 to 10 their estimate how likely they would recommend the service to a friend or colleague, with 0 indicating the lowest likelihood and 10 the highest. The customers are then grouped to "promoters" (rating 9 or 10), "passively satisfied" (rating 7 or 8), and

“detractors” (rating 0 to 6). NPS is percentage on range -100 percent to +100 percent. $NPS = P - D$, where P = percentage of promoters, D = percentage of detractors.

The NPS is widely used in business. Reichheld (2006) states that the best companies reach the NPS above 50 percent, whereas the worse values are negative, the typical company lying between 5 percent and 10 percent.

According to Reichheld (2003), those who gave the likelihood estimate 0-6, were most likely to spread a negative word and next time they chose another service or product if available. Those who gave the likelihood estimate 7-8, were found to be relatively passive in spreading a word about their customer experience but they were susceptible to influences of choosing another service or product if available but remained loyal more often than the detractors. Only those who gave the highest likelihood 9-10 were found to spread a positive word and they were most unlikely to choose a competing product or service.

Information of the using NPS in public sector organizations is imperfect but Múčka (2014) assumed the idea of NPS to be applicable in the public administration, too. Though other indexes than the NPS derived from the business exist, there is no literature about using them in libraries. The NPS was accepted as an indicator to the new International Standard ISO 21248 (Quality assessment for national libraries) that is under construction in ISO being in the Draft International Standard stage.

In the library world, the NPS was tested in the National Library of Estonia that was probably the first library reported of its use (Välbe 2015, 2016). The results from the National Library of Estonia seems very promising and compared to business, the levels of NPS among the library patrons are very high: the NPS for new customers in 2016 was 64 percent (Välbe 2017). A high value of NPS 29.9 percent was found also in the Finna user survey with 14,478 respondents in 2016 (Original material of the National user survey of Finna service 2016 analysed by the author, Laitinen 2018). The latest Finna user survey was conducted in 2018 and the high trend of user satisfaction seems to continue: the NPS in the latest survey with 33,443 respondents, resulted the NPS value of 43,9 percent. (Original material of the National user survey of Finna service 2018 analysed by the author).

3. Concluding remarks

Because the NPS is easy to shape and no laborious or costly methods are needed (skill to use Excel is enough), it seems an interesting tool for quick and easy conversion of qualitative data into numerical values, thus indicating the customers' satisfaction and loyalty.

The seeming neglecting of the passives (score 7-8) might be seen as a disadvantage and a risk of losing information. Yet, the risk is avoidable in case the original recommendation of Reichheld (2003) is followed asking the respondent to justify the score he gave asking the open question “Why?”. The open answers of each group give valuable information about the critical issues to be cured or developed further, as well as the success factors. Especially, the two successive high scores of NPS of the Finna service, prompts to a more deepgoing analysis of the reasons for the estimations the respondents gave; the resources for further analysis were granted in 2018.

Because the results of using the NPS in libraries or other cultural heritage organizations are sparse, as with any indicator, the restrictions of the NPS must be known and taken into account.

Yet, the fact that the NPS is adopted from the business, should not be a constraint but naturally, discussion and more evaluation and experience about use and applicability of the NPS type market analysis based indicator in the cultural heritage organizations are needed.

As appeared, to measure the impact of services produced by the networking of several organizations and the added value perceived by the patrons, new methods of impact assessment are needed, as well as change in the way of thinking.

Though it is generally accepted that the services of the cultural heritage organizations shall be produced cost-effectively, a too tight “treasurer sentiment” may jeopardize carrying out the before mentioned mission of the cultural heritage organizations. Hence, one should become aware of so-called “socially responsible investing” known in the business and adopt the idea in the cultural heritage organizations, meaning responsible owner policy often with no direct aim for a specified societal value. As we know intuitively, the libraries or other cultural heritage organizations if some do produce societal value, but there are challenges to demonstrate and measure it because the benefits usually fall on many different directions and it is difficult to recognize which of the benefits observed in the society might be accredited to the cultural heritage organization.

However, because the evidence of impact of the operations of cultural heritage organizations is needed anyway to justify the resource needs, appropriate tools must be in use. For evaluation of impact of the organization, the main goal is to obtain knowledge about the strengths as well as the points of development of the services thus supporting the management process keeping in mind the produce of added value for the clientele. This requires refining the information collected in the organization e.g. by combining information from different sources and thus refining the data to obtain full benefit from the statistics and all other collected data, e.g. user surveys.

The traditional statistics – the “hard methods” – create a sound basis for analysing the operations of the cultural heritage organizations and they meet the need for gaining facts for reporting and planning. This is why it is important for those working in the management of the cultural heritage organizations to acquire the skill of understanding statistics.

The statistical data also shall be linked with the information collected in other ways, for example with information from the user surveys, library computing system, accounting material, or even from other statistics, such as with information obtained from the demographic statistics, geographic information etc. to help in the evaluation and future planning.

When explored concurrently, these different data types can complement each other for assessment purposes and together provide stronger evidence than if they were handled separately. Certain changes in library services that are displayed in statistics can be compared with the survey results in order to explore if users’ views somehow reflect the development.

The international cooperation in formulating guidances of data collection for evaluation has affected the developing of impact assessment of the cultural heritage organizations for its part. It is most clearly seen in the library sector that has the standard ISO 16439 for assessing the impact of libraries. It might be useful for the other sectors of cultural heritage organizations, too, to draw up an evaluation standard of the same type to strengthen their efforts to respond to the need to show proof of their value for their clientele, for their parent organizations and for the society.

Evaluating the impact of the services of new types – e.g. using the materials in the applications of third parties through interfaces as applies to the Finna service – might be inaccessible or the result of evaluation might be open to false interpretations without mutual understanding how to measure these services. The results taken from evaluation of the services of this type tell about the common result of the whole group of the cooperating organisations that must be taken into account in the interpretation of the results.

Hence, it is necessary to evaluate the services built in cooperation of several quarters in the spirit of common international manners like the ISO 16439 and possibly other standards of the future, not to forget the idea of testing new types of indicators such as the NPS mentioned here as one possible example.

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